

Appl. No. 09/522,185
Filed: March 9, 2000
RCE w/Amend. dated October 25, 2006
Resp. to Advisory action mailed October 17, 2006

REMARKS

Claims 1, 3-12, 26, 38-49, 74, 91 and 175-192 are pending in the Application. Claims 179-182 were allowed, claims 1, 3-6, 9-11, 26, 38-43, 45-49, 74, 91, 175-178 and 183-192 were rejected, and claims 7, 8, 12 and 44 were objected to in the final Office action mailed July 25, 2006. A response was filed September 25, 2006, and an Advisory Action that maintained the allowance of claims 179-182 , the rejection of claims 1, 3-6, 9-11, 26, 38-43, 45-49, 74, 91, 175-178 and 183-192, and the objection to claims 7, 8, 12 and 44 of the Application was mailed October 17, 2006. The amendments of the response filed September 25, 2006 were not entered. Claims 1, 26, 49, 74, 175 and 178-182 are independent claims. Claims 3-12 and 183-185, claims 38-48 and 186, claims 187 and 188, claims 91 and 189, claims 176, 177, 190 and 191, and claim 192 depend either directly or indirectly from independent claims 1, 26, 49, 74, 175 and 178, respectively. Applicants respectfully request reconsideration of claims 1, 3-12, 26, 38-49, 74, 91, 175-178, and 183-192, in light of the following remarks.

Amendments to the Claims

Claims 1, 26, 49, 74, 175 and 178 have been amended to more clearly define the claimed subject matter. Applicants respectfully submit that no new matter is added by these amendments.

Claims 184, 187 and 190 have been amended to correct antecedent issues. Applicants respectfully submit that no new matter is added by these amendments.

Objections to the Claims

Claim 175 was objected to due to informalities. Applicants have amended claim 175 as described above in an effort to further the Application towards allowance. Applicants respectfully submit that the objection has been overcome, and request that the objection to claim 175 be withdrawn.

Claims 7, 8, 12 and 44 were objected to in the Office action as being dependent upon a rejected base claim, but were deemed allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. The Applicants respectfully

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traverse the rejection of the respective base claims. Claims 7, 8 and 12 and claim 44 depend either directly or indirectly from independent claims 1 and 26, respectively. Applicants have amended base claims 1 and 26 as shown above, believe that the rejections of claims 1 and 26 have been overcome, and that claims 1 and 26 are allowable, for at least the reasons set forth below. Therefore, the Applicants respectfully request that the objections to claims 7, 8, 12 and 44 be withdrawn.

Rejection of Claims

Rejections Under 35 U.S.C. §112 (First Paragraph)

Claims 184, 187 and 190 were rejected under 35 U.S.C. §112, first paragraph. The Applicants respectfully traverse the rejection. However, the Applicants have amended claims as shown above, to correct antecedent issues, and to further the Application towards allowance.

Regarding claims 184, 187 and 190, the Office action states that “...nowhere in the specification disclose what are the levels of functionality, what includes an algorithm, how algorithm is being selected, how levels of functionality are being selected, or what is being selected.” (emphasis in original) (Office action, page 2, item 3, line 9 to page 3, line 2) Applicants respectfully disagree. The Applicants respectfully submit that “...wherein dynamically enabling and disabling signal processing functionality comprises selecting from a plurality of levels of functionality of an algorithm” is supported, for example, in FIG. 3 and in the text of pages 9 and 67-74 of the Application. Although described in terms of “complexity reduction levels”, it is clear to one of skill in the art that, in the context of the present invention, the reductions in complexity correspond to different levels of functionality of the affected algorithms, and of the signal processing as a whole.

With regard to “levels of functionality”, the Application teaches in one example a DSP platform that includes four complexity reduction levels (i.e. levels of functionality). (page 72, lines 8-9) The text on pages 72 and 73 of the Application describes examples of the four levels of functionality, and provides examples of different levels of signal processing algorithm functionality

that may be part of each level. For example, at an exemplary first level of functionality (i.e., complexity reduction), no change in functionality may be in effect, while at an exemplary second level of functionality (i.e., complexity reduction), an echo canceller algorithm may be bypassed, adaptation may occur only every other frame, use of an adaptive codebook may be bypassed, and fixed excitation searches may be reduced. (page 72, lines 14-19). One of skill in the art would clearly understand that “complexity reductions” as described on pages 72 and 73 correspond to different levels of functionality of the signal processing being performed.

With regard to “what includes an algorithm”, the Application teaches in one example that complexity reductions (i.e., selection of levels of functionality) in signal processing algorithms such as voice encoders (e.g., ITU G.729 or G.723.1) may be made. However, the Application also makes clear that the techniques described in the Application may be suitable for use in other applications. (page 68, lines 12-16)

With regard to “how algorithm is being selected”, the Applications teaches in one example that with respect to an echo canceller algorithm, voice activity in one direction of a bidirectional path may determine whether echo cancellation is employed, whether a frequency of adaptation (i.e., a level of functionality of the echo canceller) is adjusted, and whether an algorithm for a transversal filter is executed. (page 69, lines 1-11)

With regard to “how levels of functionality are being selected”, the Application teaches in one example that a complexity reduction (i.e., for a second exemplary level of functionality) of a bypassing of an adaptive codebook for an ITU G.723.1 voice encoder may be selected if the frame energy is less than -55 dBm0. (page 72, lines 11-17)

With regard to “what is being selected”, the Application teaches in one example that a resource manager preferably minimizes power consumption and computational cycles (i.e., computational load) by dynamically selecting different complexity reductions (i.e., levels of signal processing functionality) based on the processing requirements for voice frames and statistics of voice signals. (page 71, lines 25-30)

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Therefore, for at least the reasons set forth above, the Applicants believe that the disclosure of the Application complies with the written description requirement of 35 U.S.C. §112, first paragraph, and respectfully request that the rejection of claims 184, 187 and 190 under 35 U.S.C. §112, first paragraph, be withdrawn.

Rejections Under 35 U.S.C. §112 (Second Paragraph)

Claims 184, 187 and 190 were rejected under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The Applicants respectfully traverse the rejection. However, the Applicants have amended claims 184, 187 and 190 as shown above, to correct antecedent basis, and to further the Application towards allowance. The Office action states that "...it is unclear whether an algorithm, levels of functionality, or both are being selected." (Office action, page 3, item 5, lines 5-6) The Applicants respectfully disagree. The Applicants respectfully submit that the text of claims 184, 187 and 190 is quite clear, and that the "selecting" is "from a plurality of levels of functionality of an algorithm." That is, that the algorithm has a plurality of levels of functionality, and that the selecting is from the plurality of levels of functionality of the algorithm. The Applicants believe that the text of amended claims 184, 187 and 190 comply with the requirements of 35 U.S.C. §112, second paragraph, and respectfully request that the rejection of claims 184, 187 and 190 under 35 U.S.C. §112, second paragraph, be withdrawn.

Rejections Under 35 U.S.C. §103(a)

Claims 1, 3, 49, 175, 178, 183, 184, 187 and 190 were rejected under 35 U.S.C. §103(a) as being unpatentable over Guy et al. (US 5,187,591, hereinafter "Guy") in view of Bartholomew et al. (US 6,292,479, hereinafter "Bartholomew") and Shaffer et al. (US 6,411,601, hereinafter "Shaffer"). The Applicants respectfully traverse the rejection. However, in an effort to further the Application towards allowance, the Applicants have amended independent claims 1, 49, 175 and 178, as shown above.

The Applicants respectfully submit that the Examiner has failed to establish a case of *prima facie* obviousness for at least the reasons provided below. M.P.E.P. §2142 clearly states that “[t]he examiner bears the initial burden of factually supporting any *prima facie* conclusion of obviousness.” The M.P.E.P. §2142 goes on to state that “[t]o establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based on applicant’s disclosure.”

With regard to amended claims 1 and 49, the Applicants respectfully submit that the proposed combination of references, taken alone or in any combination, fails to teach, suggest, or disclose, for example, “...a resource monitor that monitors processor resources used by one or both of the voice exchange and the data exchange, and that dynamically enables and disables signal processing functionality used by the one or both of the voice exchange and the data exchange in the exchange of one or both of the voice and data signals of a call, to control processor computational load...”, as recited in Applicants’ amended claim 1; and “...dynamically enabling and disabling signal processing functionality used in the exchange of one or both of the voice and data signals of a call, to control processor computational load...”, as recited in Applicants’ amended claim 49.

Applicants respectfully submit that both Guy and Bartholomew are silent with respect to management of resources used by a signal processor. Applicants appreciate recognition in the Office action that neither Guy nor Bartholomew explicitly discloses processor resources and controlling processor computational load.“ (Office action, page 6, lines 6-7) The Office action alleges that “...CPU, DSP, or computer controlling/managing computer processing power/capacity, computer-processing memory, and/or computer processing power consumption/usage are so well known in the computer art.” (Office action, page 6, lines 7-9) The Applicants respectfully disagree, and submit that “...a resource monitor that monitors processor resources used by one or both of the voice exchange and the data exchange, and that

dynamically enables and disables signal processing functionality used by the one or both of the voice exchange and the data exchange in the exchange of one or both of the voice and data signals of a call, to control processor computational load...”, as recited in Applicants’ amended claim 1; and “...dynamically enabling and disabling signal processing functionality used in the exchange of one or both of the voice and data signals of a call, to control processor computational load...”, as recited in Applicants’ amended claim 49, are not well known or obvious in the art. In an effort to overcome the recognized deficiencies of Guy and Bartholomew, the Office action alleges that Shaffer discloses “...a resource monitor (see FIG. 2, Resource availability monitor 42 of the gateway 10) that monitors processor resources used by one or both of voice processing (see FIG. 2, resource requirement module 40; see col. 4, line 25-30; voice only processing) and data processing (see FIG. 2, resource requirement module 40; see col. 4, line 25-35; video processing) and that dynamically enables (see FIG. 4, step 74, 84; based on DSP/CPU resource availability dynamically processing the call) and disable signal processing functionally (see FIG. 4, 74, 76, 78, 80; based on DSP/CPU resource availability dynamically holding/stopping/disabling the processing of a call) used by one or both of voice processing and the data processing to control processor computational load (see col. 6, line 60 to col. 7, line 50; processing of voice, video, or both to control DSP resources/load).” (Office action, page 6, lines 9-19) The Applicants respectfully submit that Shaffer fails to disclose “...a resource monitor that dynamically enables and disables signal processing functionality used by the one or both of the voice exchange and the data exchange in the exchange of one or both of the voice and data signals of a call...”, as recited in Applicants’ amended claim 1; and “...“dynamically enabling and disabling signal processing functionality used in the exchange of one or both of the voice and data signals of a call, to control processor computational load...”, as recited in Applicants’ amended claim 49. Instead, Shaffer teaches receiving digital signal processing (DSP) requirements in a call request, before a call is established and voice and data signals are exchanged, and determining whether the DSP requirements exceed DSP availability. (Abstract) If all resources needed for a call are not available, the requests for needed resources are queued for a predetermined time interval, and the call is not established until all resources become available. (col. 6, line 57 to col. 7, line 52) The Shaffer reference says nothing about dynamically enabling and disabling signal processing functionality used in the exchange of one

or both of the voice and data signals of a call. Applicants therefore submit that Guy, Bartholomew and Shaffer, taken alone or in any combination, fail to teach all of the limitations of Applicants' amended claims 1 and 49, as required by MPEP §2142.

Therefore, Applicants believe that amended claims 1 and 49 are allowable over the proposed combination of references, for at least the reasons set forth above. Applicants respectfully submit that claims 3-12 and 183-185 and claims 187 and 188 depend either directly or indirectly from amended claims 1 and 49, respectively. Because claims 3-12 and 183-185 and claims 187 and 188 depend, respectively, from claims 1 and 49, Applicants respectfully submit that claims 3-12 and 183-185 and claims 187 and 188 are also allowable, for at least the reasons set forth above with respect to claims 1 and 49, respectively. Therefore, Applicants respectfully request that the rejection of claims 1, 3, 49, 183, 184 and 187 under 35 U.S.C. §103(a) be withdrawn.

With regard to amended claim 175, the Applicants respectfully submit that the proposed combination of references fails to teach, suggest or disclose, for example, a method for interfacing a plurality of telephony devices with a packet based network, the packet based network adapted for transmission of packetized signals, the method comprising depacketizing an incoming packetized signal from the packet based network, the depacketized signal having an associated type; identifying the type of the depacketized signal as one of voice signal, fax signal, or data signal; if the type of the depacketized signal is voice signal, performing a voice mode signal processing on the depacketized signal; if the type of the depacketized signal is fax signal, performing a fax relay mode signal processing on the depacketized signal; if the type of the depacketized signal is data signal, performing a data modem relay mode signal processing on the depacketized signal; transmitting the depacketized processed signal to a corresponding type of telephony device of the plurality of telephony devices; and dynamically enabling and disabling signal processing functionality during processing of the depacketized signal, to control processor computational load. More specifically, the proposed combination of Guy, Bartholomew and Shaffer fails to teach or suggest, at least, dynamically enabling and disabling signal processing functionality during processing of the depacketized signal, to control processor computational load, as recited in Applicants' claim 175. As recognized in the Office action, neither Guy nor Bartholomew explicitly discloses processor resources and controlling processor computational

load. (Office action, page 6, lines 6-7) Applicants respectfully submit, therefore, that Guy and Bartholomew also do not disclose dynamically enabling and disabling signal processing functionality during processing of the depacketized signal, to control processor computational load, as recited in Applicants' amended claim 175.

Applicants also respectfully submit that Shaffer fails to teach or suggest dynamically enabling and disabling signal processing functionality during processing of the depacketized signal, to control processor computational load. Instead, Shaffer teaches receiving digital signal processing (DSP) requirements in a call request, before a call is established and processing of depacketized signals takes place, and determining whether the DSP requirements exceed DSP availability. (Abstract) If all resources needed for a call are not available, the requests for needed resources are queued for a predetermined time interval, and the call is not established until all resources become available. (col. 6, line 57 to col. 7, line 52) The Shaffer reference says nothing about dynamically enabling and disabling signal processing functionality during processing of a depacketized signal, to control processor computational load. Applicants therefore submit that Guy, Bartholomew and Shaffer, taken alone or in any combination, fail to teach all of the limitations of Applicants' amended claims 175, as required by MPEP §2142.

Therefore, Applicants believe that amended claim 175 is allowable over the proposed combination of references, for at least the reasons set forth above. Applicants respectfully submit that claims 176 and 177 depend either directly or indirectly from amended claim 175. Because claims 176 and 177 depend from claim 175, Applicants respectfully submit that claims 176 and 177 are also allowable over the proposed combination of references, for at least the reasons set forth above with respect to claim 175. Therefore, Applicants respectfully request that the rejection of claim 175 under 35 U.S.C. §103(a) be withdrawn.

With regard to amended claim 178, the Applicants respectfully submit that the proposed combination of references fails to teach, suggest or disclose, for example, a method for integrated interfacing of a plurality of telephony devices to a packet based network, the packet based network adapted for transmission of packetized signals, the method comprising estimating

a pitch period of a voice band signal using an autocorrelation function; comparing the estimated pitch period to a plurality of thresholds; packetizing a voice signal, a fax signal, or a data signal in a packetization engine to generate a packetized signal, based upon the comparing and at least one power measurement of the voice band signal; and transmitting the packetized signal over the packet based network to a far end telephony device. More specifically, the Guy, Bartholomew and Shaffer references, taken alone or in any combination, fail to teach or suggest, at least, estimating a pitch period of a voice band signal using an autocorrelation function. Bartholomew and Shaffer fail to disclose anything with respect to estimating a pitch period of a voice band signal, and make no mention of "pitch" or "pitch period". Guy mentions "pitch", but fails to disclose "pitch period" and any technique for determining "pitch period", let alone performing such an operation using an autocorrelation function.

The Applicants respectfully submit that the Guy, Bartholomew and Shaffer references, taken alone or in any combination, fail to teach or suggest, at least, anything about comparing a pitch period estimate to a plurality of thresholds. Guy, Bartholomew and Shaffer are silent with respect to the use of thresholds for anything, and therefore fail to disclose comparison of an estimate of pitch period with a plurality of thresholds.

The Applicants also respectfully submit that the Guy, Bartholomew and Shaffer references, taken alone or in any combination, fail to teach or suggest, at least, packetizing a voice signal, a fax signal, or a data signal in a packetization engine to generate a packetized signal, based upon the comparing and at least one power measurement of the voice band signal. As set forth above, the proposed combination of references fails to teach or suggest pitch period, and comparing a pitch period estimate to a plurality of thresholds. Applicants respectfully submit that Guy, Bartholomew and Shaffer therefore fail to teach or suggest packetizing a voice signal based on such a comparison. In addition, the Guy, Bartholomew and Shaffer references, taken alone or in any combination, fail to teach or suggest, at least, packetizing a voice signal based on such a comparison of pitch period and at least one power measurement. The proposed references fail to teach anything with respect to power measurements of a voice band signal, let alone their use in packetization of a signal, or use in combination with pitch period of the voice band signal.

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Applicants therefore submit that Guy, Bartholomew and Shaffer, taken alone or in any combination, fail to teach all of the limitations of Applicants' amended claim 178, as required by MPEP §2142.

Therefore, Applicants believe that amended claim 178 is allowable over the proposed combination of references, for at least the reasons set forth above. Applicants respectfully submit that claim 192 depends from amended claim 178. Because claim 192 depends from claim 178, Applicants respectfully submit that claim 192 is also allowable, for at least the reasons set forth above with respect to claim 178. Therefore, Applicants respectfully request that the rejection of claim 178 under 35 U.S.C. §103(a) be withdrawn.

Claims 4-6 and 9-11 were rejected under 35 U.S.C. §103(a) as being unpatentable over Guy in view of Bartholomew and Shaffer, as applied to claim 1 above, and further in view of Ohlsson (US 6,452,950, hereinafter "Ohlsson"). The Applicants respectfully traverse the rejection. The Applicants respectfully submit that claims 3-12 and 183-185 depend either directly or indirectly from independent claim 1. Applicants believe that amended claim 1 is allowable over the proposed combination of references, in that Ohlsson fails to overcome the deficiencies of Guy, Bartholomew and Shaffer, as set forth above. Because claims 3-12 and 183-185 depend from independent claim 1, Applicants respectfully submit that claims 3-12 and 183-185 are allowable over the proposed combination of references, as well. Therefore, for at least the reasons set forth above, Applicants respectfully request that the rejection of claims 4-6 and 9-11 under 35 U.S.C. §103(a) be withdrawn.

Claims 26, 45, 47, 48, 74 and 91 were rejected under 35 U.S.C. §103(a) as being unpatentable over Guy in view of Bartholomew. The Applicants respectfully traverse the rejection. However, the Applicants have amended claims 26 and 74 as shown above, in an effort to further the Application towards allowance.

With regard to amended claim 26, the Applicants respectfully submit that the proposed combination of Guy and Bartholomew fails to teach, suggest, or disclose, for example, "...a pitch period estimator for estimating a pitch period of a voice band signal from one or both of the first and second telephony devices, using an autocorrelation function; signal power measurement circuitry for producing at least one measurement of power of the voiceband signal from one or both of the first and second telephony devices; and a call discriminator for selectively enabling at least one of the voice exchange and the data exchange based at least upon a comparison of the pitch period estimate and a plurality of thresholds, and the at least one measurement of power of the voiceband signal...", as recited in Applicants' claim 26; and "...estimating a pitch period of a voice band signal from one or both of the first and second telephony devices, using an autocorrelation function; discriminating between voice signals and data signals based on a comparison of the estimated pitch period and a plurality of thresholds, and at least one power measurement of the voice band signal...", as recited in Applicants' claim 74. More specifically, the Guy and Bartholomew references, taken alone or in any combination, fail to teach or suggest, at least, estimating a pitch period of a voice band signal using an autocorrelation function. Bartholomew fails to disclose anything with respect to estimating a pitch period of a voice band signal, and makes no mention of "pitch", "pitch period", or "autocorrelation". Guy mentions "pitch", but fails to disclose "pitch period" and any technique for determining "pitch period", let alone performing such an operation using an autocorrelation function.

The Applicants respectfully submit that the Guy and Bartholomew references, taken alone or in any combination, fail to teach or suggest anything about comparing a pitch period estimate to a plurality of thresholds. Guy and Bartholomew are silent with respect to any use of thresholds, and accordingly fail to disclose comparison of an estimate of pitch period with a plurality of thresholds.

The Applicants also respectfully submit that the Guy and Bartholomew references, taken alone or in any combination, fail to teach or suggest, at least, "...selectively enabling at least one of the voice exchange and the data exchange based at least upon a comparison of the pitch period estimate and a plurality of thresholds, and the measured power of the voiceband signal...", as recited in Applicants' claim 26; and "...discriminating between voice signals and data signals

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based on a comparison of the estimated pitch period and a plurality of thresholds, and at least one power measurement of the voice band signal...”, as recited in Applicants’ claim 74. The proposed combination of references fails to teach or suggest comparing a pitch period estimate to a plurality of thresholds. Applicants respectfully submit that Guy and Bartholomew therefore fail to teach or suggest selecting or discriminating based on such a comparison. In addition, the Guy and Bartholomew references, taken alone or in any combination, fail to teach or suggest selecting or discriminating based on at least one power measurement. The proposed references fail to teach anything with respect to power measurements of a voice band signal, and their use in combination with pitch period of the voice band signal.

Applicants therefore submit that Guy, Bartholomew and Shaffer, taken alone or in any combination, fail to teach all of the limitations of Applicants’ amended claims 26 and 74, as required by MPEP §2142.

Therefore, Applicants believe that amended claims 26 and 74 are allowable over the proposed combination of references, for at least the reasons set forth above. Applicants respectfully submit that claims 38-48 and 186, and claims 91 and 189 depend either directly or indirectly from amended claims 26 and 74, respectively. Because claims 38-48 and 186, and claims 91 and 189 depend, respectively, from claims 26 and 74, Applicants respectfully submit that claims 38-48 and 186, and claims 91 and 189 are also allowable, for at least the reasons set forth above with respect to claims 26 and 74. Therefore, Applicants respectfully request that the rejection of claims 26, 45, 47, 48, 74 and 91 under 35 U.S.C. §103(a) be withdrawn.

Claims 38-43 were rejected under 35 U.S.C. §103(a) as being unpatentable over Guy in view of Bartholomew as applied to claim 26 above, and further in view Elliott et al. (US 6,614,781, hereinafter “Elliott”). The Applicants respectfully submit that claims 38-48 and 186 depend either directly or indirectly from independent claim 26. Applicants believe that amended claim 26 is allowable over the proposed combination of references, in that Elliott fails to overcome the deficiencies of Guy and Bartholomew, as set forth above. Because claims 38-48 and 186 depend from independent claim 26, Applicants respectfully submit that claims 38-48 and 186 are allowable over the proposed combination of Guy, Bartholomew and Elliott, as well. Therefore,

for at least the reasons set forth above, Applicants respectfully request that the rejection of claims 38-43 under 35 U.S.C. §103(a) be withdrawn.

Claim 46 was rejected under 35 U.S.C. §103(a) as being unpatentable over Guy in view of Bartholomew as applied to claims 26 and 45 above, and further in view Oran. (US 6,775,265). The Applicants respectfully submit that claims 38-48 and 186 depend either directly or indirectly from independent claim 26. Applicants believe that amended claim 26 is allowable over the proposed combination of references, in that Oran fails to overcome the deficiencies of Guy and Bartholomew, as set forth above. Because claims 38-48 and 186 depend from independent claim 26, Applicants respectfully submit that claims 38-48 and 186 are allowable over the proposed combination of Guy, Bartholomew and Oran, as well. Therefore, for at least the reasons set forth above, Applicants respectfully request that the rejection of claim 46 under 35 U.S.C. §103(a) be withdrawn.

Claims 185, 188 and 191 were rejected under 35 U.S.C. §103(a) as being unpatentable over Guy in view of Bartholomew and Shaffer, as applied to claims 1, 49 and 175 above, and further in view Sanders et al. (US 6,704,308, hereinafter “Sanders”). The Applicants respectfully submit that claims 185, 188 and 191 depend either directly or indirectly from independent claims 1, 49 and 175, respectively. Applicants believe that amended claims 1, 49 and 175 are allowable over the proposed combination of references, in that Sanders fails to overcome the deficiencies of Guy, Bartholomew and Shaffer, as set forth above. Because claims 185, 188 and 191 depend, respectively, from independent claims 1, 49 and 175, Applicants respectfully submit that claims 185, 188 and 191 are allowable over the proposed combination of Guy, Bartholomew, Shaffer and Sanders, as well. Therefore, for at least the reasons set forth above, Applicants respectfully request that the rejection of claims 185, 188 and 191 under 35 U.S.C. §103(a) be withdrawn.

Claims 186, 189 and 192 were rejected under 35 U.S.C. §103(a) as being unpatentable over Guy in view of Bartholomew, as applied to claims 26, 74 and 178 above, and further in view Griffin et al. (US 5,826,222, hereinafter “Griffin”). The Applicants respectfully submit that claims 186, 189 and 192 depend either directly or indirectly from independent claims 26, 74 and 178,

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respectively. Applicants believe that amended claims 26, 74 and 178 are allowable over the proposed combination of references, in that Griffin fails to overcome the deficiencies of Guy and Bartholomew, as set forth above. Because claims 186, 189 and 192 depend, respectively, from independent claims 26, 74 and 178, Applicants respectfully submit that claims 186, 189 and 192 are allowable over the proposed combination of Guy, Bartholomew and Griffin, as well. Therefore, for at least the reasons set forth above, Applicants respectfully request that the rejection of claims 186, 189 and 192 under 35 U.S.C. §103(a) be withdrawn.

Conclusion

The Applicants wish to thank the Examiner for recognition of the allowable subject matter of claims 179-182.

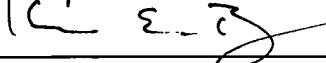
The Applicants believe that in light of the reasons set forth above, all of claims 1, 3-12, 26, 38-49, 74, 91 and 175-192 are in condition for allowance. Should the Examiner disagree or have any questions regarding this submission, the Applicants invite the Examiner to telephone the undersigned at (312) 775-8000.

A Notice of Allowability is courteously solicited.

The Commissioner is hereby authorized to charge any additional fees associated with this communication, or credit any overpayment, to Deposit Account No. 13-0017.

Respectfully submitted,

Dated: October 25, 2006



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